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Effects Of Statewide Training On Functional Behavioral Assessment (Fba) Knowledge

Kendra L. Brading
Eastern Illinois University

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Effects of Statewide Training on Functional Behavioral Assessment (FBA) Knowledge

BY

Kendra L. Brading

THESIS

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Abstract

Positive behavioral interventions and supports (PBIS) is a 3-tiered approach to eliminating problem behaviors by replacing them with appropriate behaviors. PBIS implementation differs depending on the tier. Implementation at Tier 1 focuses on school-wide prevention of problem behaviors. Tier 2 involves diminishing current problem behavior cases at the classroom-level. In Tier 3, a functional behavioral assessment (FBA) is conducted, which evaluates the problem behaviors and determines antecedents and consequences of the behaviors so that an intervention can be planned. Training educators to conduct FBAs is linked to appropriately and accurately implementing FBAs. This study examined pre and posttest scores to determine the effectiveness of a statewide FBA training given by five different trainers at seven sites across a southern state. In addition, the effects of the five different trainers on educator knowledge gained were also examined, as was the pretest/posttest's internal consistency. Results show that participants significantly increased their test scores from pretest to posttest and therefore increased their knowledge on FBAs as a result of receiving the FBA training. Additionally, these findings were consistent across all test sites and all trainers. This means the trainers did not account for any significant differences found among participants' test scores. Finally, results revealed that the test used to measure increased knowledge had moderate internal consistency

Keywords: PBIS, PBIS Implementation procedures, FBA implementation procedures, FBA effectiveness, educator training

Effects of Statewide Training on Functional Behavioral Assessment (FBA) Knowledge

What is PBIS?

Definition. Positive Behavioral Interventions and Supports (PBIS) is gaining more positive attention (Sugai et al., 2000). One reason for this is due to the requirement set forth by the Individuals with Disabilities Education Act of 2004 (IDEIA, 2004). IDEIA requires additional effort be put forth in the development of quality behavioral interventions and behavioral support planning. The National Association of School Psychologists (NASP) defines PBIS as an "empirically validated, function-based approach to eliminate challenging behaviors and replacing them with prosocial skills" (Crohn, 2001). The United States' Department of Education's Office of Special Education Programs (OSEP) further elaborated on this definition by stating PBIS is a "broad range of systemic and individualized strategies for achieving important social and learning outcomes while preventing problem behavior with all students" (OSEP, 2007, p. 1). An additional element of PBIS support plans typically include strategies for teaching the child new skills through guidance, prompting, and reinforcement in natural contexts. The skills targeted for instruction should be functional, communicative replacements or ones that are physically incompatible with the child's challenging behaviors. PBIS plans also include modifications or rearrangements of antecedent stimuli that are associated with a challenging behavior (Duda, Dunlap, Fox, Lentini, & Clarke, 2004, p. 143). The foundation of PBIS involves: (a) prevention, (b) theoretically sound and evidence-based practice, and (c) systems implementation (Sugai & Horner, 2006). PBIS is grounded in applied behavior analysis and "...emphasizes the lawfulness of behavior, interplay between physiology and environment, and ability to affect behavior through

environmental manipulations..." (Sugai & Horner, 2006, p. 247). PBIS emerged while school psychologists were seeking less aversive interventions to treat developmentally disabled individuals who demonstrated aggressive and self-injurious behaviors (Sugai et al., 2000; Warren et al., 2006).

Implementing PBIS can be done through three levels of support including primary, also known as Tier 1, (school-wide), secondary, also known as Tier 2, (classroom), and tertiary, also known as Tier 3 (individual). Primary level support emphasizes preventing the occurrence of problem behaviors by using proactive strategies to maintain and increase prosocial behaviors. Secondary and/or tertiary levels emphasize reducing the impact or intensity of problem behavior occurrences (Horner & Sugai, 2004). The three levels of support will be discussed further in the PBIS rationale section.

Why should schools implement PBIS?

Schools should implement PBIS because it minimizes problematic behaviors as well as maximizes academic engagement in schools for all students ("What is," 2010; Crohn, 2001). In addition, federal guidelines require elements of PBIS to be implemented in schools (IDEA, 2004). The positive outcomes PBIS yields, and the legal implications behind it, move schools to implement PBIS.

Presence of problem behaviors. According to Research Connections (1997), general and special education teachers repeatedly list behavior management as their primary in-service need. Problem behaviors can stem from a number of factors. Children from lower socio economic status (SES) are more likely to exhibit problem behaviors than those children coming from a higher SES background (McCurdy,

Mannella, & Eldridge, 2003). One reason for this may be that children living in impoverished conditions are more likely to have exposure to family and community risk factors for antisocial behavior (McCurdy, Mannella, & Eldridge, 2003). This can be seen in children raised by a single parent whose income alone may not be able to afford a safe and secure home. This child may be exposed to potentially dangerous environmental factors such as modeling inappropriate and antisocial behavior. As a result, the child becomes exposed to unsafe surroundings as well as to individuals who use these sites as "safe havens from law enforcement (e.g., drug dealers, prostitutes, other perpetrators of crime)" (McCurdy, Mannella, & Eldridge, 2003, p. 159). Instead of learning prosocial behaviors, the child is witnessing and modeling antisocial behaviors, such as aggression, and is more likely to exhibit these behaviors at school. In turn, the child comes to school ill-equipped to access his/her learning environment successfully because he/she has learned and practiced antisocial behaviors and ultimately becomes frustrated. Many times, frustration leads to "engagement in reactionary challenging behaviors" (McCurdy et al., 2003, p. 159).

Students may engage in maladaptive behavior because they are functional in their home environment. Consequently, schools also respond reactively with punishment, which may result in suspensions or expulsions. Punishment often teaches students what not to do, not what to do, and are often ineffective.

As previously mentioned, students who cannot adequately access their learning environments often become frustrated and may eventually begin failing school. Schools that do not have supports in place to intervene and help encourage students may see high

dropout rates because these students eventually lose motivation to continue trying ("High School," n.d.).

Previous efforts, including punishment, suspension, and expulsion, have demonstrated to be ineffective at improving behavior problems in schools. Given the gravity of problem behavior and its detrimental effects on student achievement, finding appropriate intervention is imperative (Crohn, 2001). Since using positive approaches for increasing prosocial behavior has improved student behavior, this problem-solving method should be further explored. Utilizing this type of approach, especially considering legislation requiring schools to utilize policies which efficiently and effectively identify and provide services to students with behavior and academic concerns, is likely to lead to positive outcomes for students (Fairbanks, Sugai, Guardino, & Lathrop, 2007).

Legal implications. Perhaps the most compelling argument for schools is that, within the last few years, Response to Intervention (RtI) has been adopted as a method for identifying students in need, which incorporates PBIS (IDEIA, 2004). RtI is a 3-tiered problem-solving model of service delivery that focuses on prevention and interventions supports which involves "working with a school-based team to consider student performance data to identify and define learning problems, to develop interventions to solve those problems and to evaluate the effects of the interventions on the defined problem or problems" (VanDerHeyden, n.d., p. 1). Tier 1 of RtI involves the core classroom research-based instruction ensuring that all students are exposed to effective, high-quality curriculums and instruction. Schools may conduct screenings three times per year to identify those needing additional support beyond the regular

curriculum. Ideally, 80% of all students should be responding to the core standards without needing additional interventions. Tier 2 targets those students who are not successful within the general classroom milieu alone and may require supplemental or small-group interventions in a specific area in order to succeed. If the small-group interventions are ineffective, the student may require more individualized, intensive support, known as Tier 3 or tertiary prevention. The goal at Tier 3 is to remediate the current problems and to prevent additional problems from arising.

As RtI has been mandated, schools are held to higher standards when it relates to the academic and social behavior of students. Although RtI has been mandated, schools are not provided with universal guidelines to ensure they are in compliance with RtI standards. Such schools may be ill-equipped and ill-advised on how to best implement such practices or the schools lack the funds/resources to even begin meeting students' social, emotional, or behavioral needs (Fairbanks, Sugai, Guardino, & Lathrop, 2007).

PBIS offers a framework to help schools stay in check with RtI standards. For instance, school-wide implementation of PBIS would typically follow these general steps: teach behavioral expectations school-wide; develop a reward/consequence system for students following or not following behavioral expectations; gather data to ensure consistency and evaluation of implementation. Such steps are aligned with RtI standards (Fairbanks, et al., 2007).

In addition to RtI, IDEIA 2004 enforces that, "in the case of a child whose behavior impedes his or her learning or that of others, the child's IEP (Individualized Education Program) team must consider, when appropriate, strategies, including positive behavioral intervention strategies and supports, to address that behavior" (Sugai et al.,

2000, p. 131). In other words, IDEIA 2004 mandated FBAs be conducted, and interventions to be developed based on the information collected, when a child with a disability exhibits problem behaviors (Weber, Killu, Derby, & Barretto, 2005; Burke, Hagan-Burke, & Sugai, 2003). However, the government failed to regulate the specific steps to take in which to complete this process. Consequently, the U.S. Department of Education, the Office of Special Education and Rehabilitative Services (OSERS) wrote a Technical Assistance Guide outlining FBA procedures. These, too, are vague and leave school administrators uncertain about how to properly conduct an FBA (Weber et al., 2005). In addition, each state is responsible for translating the federal government's guidelines and developing the criteria and a plan on how FBAs will be conducted in their state. Although it was found that 48 of the 50 states in 2005 had procedures in place for the development of an FBA, that is not to say that schools a) received the information from the state, b) were using the resources if they did receive them, or c) were using them correctly if they were using them at all (Weber et al., 2005).

FBAs should be conducted to find the most effective intervention for a student. PBIS is the recommended framework to accomplish this. The United States' Department of Education's OSEP collaborated with Safe and Drug Free Schools program in the form of a $600,000 grant to support PBIS efforts. Since then, the U.S. government has continued to support and promote projects related to PBIS as a means to reduce challenging behaviors in children (Crohn, 2001).

Equally important, conducting an FBA and developing and implementing a Behavior Intervention Plan (BIP) is mandatory, according to the law, when a child is removed from his/her current placement for either a) carrying a weapon to school or to a

school function, b) possesses, sells, or uses illegal drugs at school or at a school function, or c) has inflicted serious bodily injury to another person while at school or at a school function (IDEIA, 2004). It is also necessary to conduct an FBA within 10 school days of a child's placement being changed due to a code of conduct violation. At this time, the Individualized Educational Plan (IEP) team must review any pertinent information to determine if the behavior occurred a) because of the child's disability, b) failure to implement the child's IEP, or c) independent of these reasons. If it is determined that the conduct violation occurred because of the child's disability, an FBA should have been conducted prior to the placement change and a BIP must be put in place to eliminate the problem behavior. Or, if a BIP were already in place, it should be modified in hopes to eliminate future problem behaviors (IDEIA, 2004).

PBIS implementation procedures. PBIS implementation occurs through three tiers and differs throughout each tier. Implementation at the primary tier, or Tier 1, is generally school-wide, focuses on preventing problem behaviors, and typically includes the following steps: "(a) defining positive behavioral expectations, (b) teaching these expectations to all students, (c) maintaining ongoing strategies to acknowledge and reward appropriate behavior, (d) establishing a consistently implemented continuum of consequences for inappropriate behavior, and (e) gathering and using behavioral data for active decision-making" (Horner et al., 2004, p. 3).

PBIS implementation at the secondary tier, or Tier 2, occurs at the classroom-level, aims at diminishing current problem behavior cases, and includes the following core elements: (a) universally screening all students to determine at-risk students and monitoring their progress, (b) developing and implementing a system for increased

structure and predictability, (c) developing and implementing a system for increased adult feedback contingent on student behavior, (d) linking behavioral and academic performance of students, (e) increasing home/school communication, and (f) gathering and using data for decision-making.

PBIS implementation at the tertiary level, or Tier 3, includes more intensive supports and occurs on an individual basis. The goal at this point in the PBIS process is to reduce or eliminate the problem behavior and teach replacement behaviors. Implementation at the tertiary level, or Tier 3, includes the following features: FBA, comprehensive assessment, linking academic and behavioral supports to intervention, and using data collection for decision-making. Even more, the intervention should be individualized to the particular student displaying the problem behavior and based upon information collected during the assessment process. Generally speaking, the individualized intervention should focus on, "(a) prevention of problem contexts, (b) instruction on functionally equivalent skills, and instruction on desired performance skills, (c) strategies for placing problem behavior on extinction, (d) strategies for enhancing contingence reinforcement of desired behavior, and (e) use of negative or safety consequences if needed" ("Is school-wide," 2009, p. 2).

In order for tertiary prevention to be the most successful, it is recommended that schools have affirmative primary and secondary systems in place for PBIS. The use of a Behavior Plan is also recommended, where individualized supports are collaboratively implemented by those who know the student best. For instance, this may include educators, the student's parent(s)/guardian(s), direct service providers, and additional school personnel with background in conducting FBAs. The process should also be

comprehensive with as much information as possible being gathered as to the antecedents and consequences of the problem behavior. In short, tertiary prevention should be conducted by multiple people using multiple methods ("Frequently Asked," n.d.).

As previously mentioned, tertiary prevention includes the development of a Behavior Plan through the FBA process. At the third tier, FBAs should be conducted in several specific situations when: (a) a student has a known history of engaging in a problem behavior, (b) the student's behavior presents a danger to self or others, before a student is to be placed in an alternative education setting, (c) a student's suspension approaches 10 cumulative (not necessarily consecutive) days, and (d) at the beginning of Tier 3, when the student's problem behavior impedes the learning of self or others.

When implementing PBIS at Tier 3, an FBA is conducted to further evaluate the student's behavior and to determine the antecedents and consequences of the behaviors. The FBA process aims (a) to describe the problem behavior in observable terms, (b) to determine both the setting and the time of day when the inappropriate behavior occurs, (c) to determine the function of the behavior, and (d) to reduce the inappropriate behaviors that are developed through teaching positive alternate behaviors (Johnson-Gros, 2010). Teaching positive replacement behaviors is crucial so that, when the environment sets the stage for the previous problem behavior to occur, the child can engage in the newly learned positive alternate behavior instead of reverting back to the inappropriate behavior.

The FBA and BIP development process is conducted in four phases: (a) descriptive, (b) interpretive, (c) verification, and (d) treatment implementation and

monitoring phases. During the descriptive phase, data is collected to define the target behavior and identify environmental events contributing to the target behaviors. Data collection procedures may include directly observing the student in several settings as well as by collecting information from the teacher, parent(s), and the student directly via interviews and/or rating scales. Academic and discipline record reviews should also be consulted. If any previous intervention attempts have been made, the success or failure of these interventions should be explored during the descriptive phase as well.

Interviews are a useful data collection method in two ways – First, they provide a guided discussion so the interviewer can have an agenda to follow to ensure each desired area is discussed. Second, interviews afford more flexibility than a rating scale as the interviewer can ask the informant to expand upon any pertinent topics that arise during the interview that may provide additional information to guide the FBA process. Interviews can be completed with several informants to gain information on the student, including educators, parents/guardians, and the student. Published interviews are available to behavior analysts such as the Functional Assessment Informant Record for Teachers (FAIR-T; Edwards, 2002) and the Functional Analysis Interview (FAI; O'Neill, 1997), among others.

Rating scales are an additional data collection method, which can provide specific information regarding a student's problem behavior. For instance, some rating scales are designed to gather in-depth information in a particular area, such as the Conner's, which gathers information on Attention Deficit Hyperactivity Disorder (ADHD). Like interviews, rating scales can be completed by several informants, including educators, parents/guardians, and students engaging in the problem behavior.

Observations can be done both systematically and anecdotally. Anecdotal procedures include narrative recording and sequence (or contingency) analysis. Systematic observation methods include frequency count or event recording, duration recording, latency recording, interval recording (partial- and whole-interval recording), and momentary time sampling. Each observation method is specifically designed to measure different aspects of the target behavior (i.e., the intensity, duration, etc.). Therefore, the frequency and intensity of the target behavior should be considered when selecting the observation method and the method which yields the most appropriate results should be chosen.

One way to determine the environmental factors setting the occasion for or maintaining the target behavior is through conditional probability analysis, which is a systematic antecedent-behavior-consequence (A-B-C) observation (Johnson-Gros, 2010). During the observation, only the antecedents leading to and the consequences following the problem behavior are noted; any antecedents that do not lead to the target behavior and any consequences not preceded by the target behavior are not coded. Once complete, the observation reveals those antecedent events most frequently preceding the problem behavior and therefore may represent events that set the stage for the problem behavior to occur. Likewise, the consequence events that most frequently follow the problem behavior may signify those events providing positive or negative reinforcement (Johnson-Gros, 2010).

The second phase of an FBA is the interpretive phase. During this phase, information provided through the descriptive phase is interpreted and hypotheses or summary statements are generated about the functional relationships between the target

behaviors and environmental events. Next, during the verification stage, these hypotheses or summary statements are tested and the functional relationship is confirmed through a) functional analysis (FA) or b) by implementing an intervention. During a functional analysis, the hypotheses or summary statements are tested out by experimental manipulation, which is difficult to do in a school setting. The alternative would be implementing an intervention, which occurs in the fourth phase.

In the fourth and final phase, the treatment is implemented and monitored. At this point, replacement behaviors are identified and taught so that positive behaviors increase and target behaviors decrease. In addition, the focus should be on making inappropriate behaviors inefficient, ineffective, and irrelevant (Ervin et al., 2001; Johnson-Gros, 2010). The aim is to utilize proactive strategies in dealing with problem behaviors rather than maladaptive strategies. During this stage, integrity should be monitored to ensure that the intervention is being implemented as it is intended. This is crucial because treatment integrity helps ensure proper evaluation of the intervention. For instance, without treatment integrity, professionals cannot be sure the results can be attributed to the intervention. Implementing interventions as intended and thus with integrity allows professionals to conclude that changes need to be made within the intervention if it is unsuccessful. Integrity checks can be completed by the person delivering the intervention using a self-check method (intervention checklist) or by an observer with knowledge in the intervention and how it should be implemented (direct observations).

Review of Literature

FBA effectiveness. Several studies provide promising results regarding FBA effectiveness. For instance, studies have shown that FBAs are useful in determining

which environmental factors make target behaviors more likely to occur and/or what consequences may be maintaining these target behaviors (Burke et al., 2003; Ervin et al., 2001). Most research studies examine FBA's ability to reduce problem behaviors in students with behavior disorders and severe disabilities. Burke et al. (2003) examined the efficacy of FBAs when applied to a student with a learning disability. Findings revealed that escape from an undesirable academic task (i.e., reading instruction) reinforced student problem behaviors (i.e., fidgeting, off-task, arguing). Through the FBA process, data was collected through teacher interviews and direct observations, and hypothesized functions were tested through functional analysis and experimental design. Interventions (i.e. re-teaching reading instruction) were developed based on the results of the FBA. Burke et al. (2003) argued that these results were promising as they yielded knowledge on "relevant and effective instructional interventions" for a student who was engaging in problem behaviors to escape/avoid academic tasks. Further, the re-teaching intervention used for this student was successful, adding more support for the use of FBAs in determining effective interventions.

Ervin et al. (2001) reviewed 100 research articles involving FBAs in school settings to determine FBA effectiveness in reducing problem behaviors and yielding effective interventions. Results revealed that, in all but two of 148 studies examined, the FBA was successful in developing an intervention that generated a desired behavior change. Results also revealed these studies examined several aspects of FBAs—including their efficacy in controlling high-frequency problem behaviors for students with low-incidence disabilities and for developing effective interventions—but that some aspects of FBAs have been left unexamined. Specifically, few studies have investigated

schools that have conducted FBAs without assistance from behavior analysts (Burke et al., 2003; Ervin et al., 2001). Moreover, in 53.3% of the cases, the experimenter, rather than school personnel, manipulated the variable during the FBA. In 14% of the cases, school personnel manipulated the variable but had help from the experimenter or another individual. Very few studies have had school personnel conduct FBAs or manipulate variables. Therefore, few studies have sought to teach school personnel the steps in conducting an FBA successfully and consistently other than by reviewing previous studies on FBA effectiveness. Further, because of this, school psychologists and special education administrators express concern that educators may be hesitant and ill-prepared to conduct an FBA (Ervin et al., 2001; Nelson, Roberts, Mathur, & Rutherford, 1999).

The previous studies provide support as to the effectiveness and usefulness of FBAs. In addition, these studies suggest the need for teaching educators how to facilitate FBA procedures.

Educator Training

PBIS implementation has been effective in many situations for various behavior types. In addition, elements of PBIS have been legally mandated (IDEIA, 2004; Crohn, 2001). More specifically, the completion of an FBA to determine the function of the problem behavior and consequent intervention development is required by law (Crohn, 2001). The support for PBIS and the legal implications move school districts to follow such standards. However, school personnel lack the knowledge base and consequently the ability to implement PBIS in accordance with federal guidelines (Ervin et al., 2001; Nelson et al., 1999). For this reason, efforts need to be put in place to inform schools of

the a) legal reasons for implementing PBIS and specifically, FBAs and b) methods in which to carry out FBAs.

Training and positive behavior support. Kincaid, George, and Childs (2006) suggest that, in order for a PBIS training program to be successful, it must "(a) create collaborative teams, (b) follow an effective problem-solving process, (c) work with longitudinal issues in the lives of real people, and (d) develop comprehensive supports that change the environment, community, and support system" (p. 188). If so, PBIS can significantly reduce the number of problem behaviors in schools. PBIS training, according to Kincaid et al. (2006), enhances trainee's skills in (a) intervention implementation, such as the use of prompting and modeling, and in (b) preventative or proactive strategies, including the importance of the environmental arrangement as it relates to problem behaviors.

Training and FBAs. As suggested, educators can be taught to successfully complete FBAs (Iwata et al., 2000) and effectively develop interventions based on the results (Scott et al., 2001; Gabel et al., 2003). Educators require training prior to conducting FBAs so they are in accordance with the law and so that they follow the necessary FBA procedures in order to achieve adequate outcomes. Without training, educators are likely to complete FBAs inappropriately (Ervin et al., 2001; Nelson et al., 1999).

Typically, schools violate FBA procedures for the following reasons: a) unaware of IDEIA 2004 requirements, b) lack adequate training on FBAs, c) lack administrative support, and d) the requirements are inconsistent with their orientation. For this reason, research has been conducted to determine whether or not states have FBA procedures in

place to be in accordance with federal guidelines (Weber et al., 2005). This is not to say, however, that if state guidelines are in place, individual school districts are necessarily following these guidelines.

Iwata et al. (2000) suggest that teachers can be taught to successfully conduct FBAs. Scott, Liaupsin, and Nelson (2001) found promising results for training school personnel on how to facilitate an FBA and to formulate intervention plans based on the results. In this study, school personnel underwent a six-hour training session which included: (a) a brief, 30-minute summary of functional assessment, (b) steps for completing an FBA and developing function-based interventions, (c) guided practice and feedback on two case studies, (d) independent, small-group practice on a third case study, and (e) evaluation of trainers. Participants were staff members from four Midwestern elementary schools. Teams were formed which comprised of participants and at least one trained facilitator. Teams reviewed behavior referrals of 31 students across the four Midwestern schools and the following questions were explored: (a) What is the problem behavior of concern? (b) When is the problem behavior likely to occur? (c) What is the desired behavior? (d) Does the desired behavior still occur and if so what events are associated? and (e) Why do we think the student would engage in this behavior? Data were analyzed using a one way analysis of variance (ANOVA), which revealed that both training facilitators and team members were able to identify appropriate strategies for students (Scott et al., 2001). Therefore, with training, school personnel were able to successfully mock an FBA.

Gable et al. (2003) conducted a series of FBA workshops across nine school divisions in a northeastern state. Participants varied across regions and included 56

urban, 81 suburban, and 206 rural schools. The three-day training included: (a) an informational packet, (b) two days of instruction, and (c) a third day of case-study practice. Participants evaluated the training using a pretest and posttest and a Likert-type survey. Trainers also visited participating sites to observe them in operation as well as to discuss (a) impediments to performing FBAs in schools and (b) the value of instruction across time. Results revealed that schools reported a decrease in the number of behavioral incidents and consequent disciplinary actions as well as a decrease in the number of special education referrals (Gable et al., 2003) as a result of receiving training in conducting FBAs.

Additional research examined school staff's access to empirical literature describing FBA implementation (Ervin et al., 2001). Informing schools on FBA components and procedures is necessary because most school personnel lack the experience in behavior analysis required to complete FBAs effectively. Although there is considerable research on the efficacy of FBAs, in this research, most FBAs were conducted by individuals with credentials and experience in carrying out FBA procedures. Therefore, even though FBAs have demonstrated promising results in literature, this cannot be concluded if school personnel with no background or experience in FBAs were to conduct one.

Various training programs are available to educators to improve behavior within schools, including training on PBIS and FBAs. However, limitations among these trainings persist, such as the trainings often lack information on legal implications for conducting FBAs in schools, the trainings were only conducted in one region, or the researchers did not assess for knowledge gained as a result of the training (Weber et al.,

2005). For this reason, additional research in this area is needed, which the current study sought to satisfy, as educators have shown to benefit from such trainings that sufficiently train persons in FBA procedures in the past.

The current study aimed to expand upon previous research as it included information regarding the legal implications for conducting FBAs in schools. It also examined an FBA training which was given in a different region than previous studies. In addition, the current study assessed for knowledge by using a pretest and posttest measure. Specifically, this study sought to determine if educators will increase their knowledge on FBAs as a result of receiving an FBA training given by five trainers across seven sites. In addition, it will examine whether or not the different trainers have different outcomes for knowledge. Finally, it will examine the internal consistency of the pretest and posttest measure to ensure all test items were related in a reliable manner. The current study intends to answer three specific research questions.

Research Questions

1) Does the test have good internal consistency?
2) Will educators increase their knowledge on FBAs from pretest to posttest?
3) Do different trainers have different outcomes for knowledge?

Method

Participants and Setting

Participants in the current study were 251 educators from a Southern state attending Day 3 of a three-day PBIS training. The training was given at seven different sites across the Southern state, all with similar seating arrangements. Participants sat at conference tables seating five to seven people.

Demographic information was taken from the participants but not broken down by site or trainer. Thus, the demographics are reported as a whole. Of the 251 educators, 11% were male while 89% were female. The average age of the participants was 44 with a range of 26-66. The participants identified themselves as 62.15% Caucasian, 37.80% African American, and .01% as other.

Information about the education and experience of the participants was also obtained. Seventeen percent stated that the highest degree held was a bachelor's degree, while the majority of participants (61%) held a master's degree, followed by 20% holding a specialist's degree, and 5% indicating that they held a doctoral degree. The participants had an average of 17 years of experience, with a range of 1-38 years of experience.

Trainers

Information was obtained regarding trainer's gender, education, current position held, number of years of overall experience, experience with FBAs, and experience in conducting the PBIS training. There were five trainers in which two trainers gave the training twice in very similar locations. The data were grouped by trainer and not by location. Four of the five trainers responded. One female trainer did not respond to the email that was sent to her by the investigator even after several attempts.

There were three male trainers and two female trainers. Three of the trainers held a doctoral degree while one held a master's degree in education. Two trainers were assistant professors and two were psychologists in independent practice. Of the assistant professors, one trainer had held the current position for two and a half years while the other had held the current position for 16 years. Of the independently practicing psychologists, one had held the position for 16 years and the other for 24 years. One trainer had six and a half years of overall experience while the remaining three had over 20 years of overall experience. One trainer reported having six and a half years of experience with FBAs while the other three trainers reported over 10 years of experience in conducting FBAs. Trainers were also asked how often they conducted FBAs in schools. Two trainers reported they rarely conduct FBAs in schools at this time because they are not affiliated with school systems. Another trainer reported conducting two FBAs per month. The last trainer reported conducting FBAs once every three months.

Materials

The training included a PowerPoint slideshow of 132 slides to enhance participants' ability to view and retain information (See Appendix A). The six and a half hour presentation described the FBA process including when one should be conducted, the steps for completing one, what each phase of an FBA should encompass, and how to analyze the data yielded in an FBA to develop a behavior plan. The presentation also included vital legal information regarding FBAs, such as when the law states an FBA should be conducted. In addition, typical functions of behavior were also discussed along with examples of each.

The training presentation also included two vignettes to allow participants to apply and practice skills (See Appendices D and E). The first vignette described a particular referral for a student, including gender, grade, and the referral reason. The student's problem behaviors and the intervention developed by the student's team were clearly defined. In addition, data were graphed to provide additional information. Participants were to use this background information to create an appropriate behavior plan.

The second vignette allowed participants to practice decision-making based on a separate referral. Vignette two also described the student's gender, age, behaviors, and included a graph of collected data. Then, the training presentation listed steps for appropriate decision-making, allowing participants to step through the vignette to determine the appropriate decision.

In order to determine whether participants gained knowledge throughout the training, trainers developed a test which participants completed prior to and at the conclusion of training (See Appendix B). The paper-and-pencil test was type-written on 8 ½ by 11 inch white paper. It consisted of 14 questions in multiple choice, fill-in-the-blank, and listing formats. Each question was worth 6.25 points each for a total of 100 points.

Procedures

The PBIS training included three days of information covering Tiers 1, 2, and 3 of PBIS implementation. Each day began with a pretest, provided information on PBIS through a PowerPoint slideshow, then ended with a posttest. For the purpose of this study, only information provided on Day 3 of training was selected and analyzed because

it related specifically to Tier 3 behavioral interventions and FBAs, which is what the current study sought to examine. However, all participants attended all three days of the training. It should be noted that days one and two did not cover FBAs so there was no overlap in information provided on Day 3 with any previous training day. This is important to note so that the pretest given at the beginning of Day 3 was assessing only previous knowledge the participant brought to the training rather than any knowledge gained during training. Participants were offered continuing education credits for attending. Knowledge was assessed using pretest and posttest measures.

Independent variable. The independent variable in the current study is Day 3 of the FBA training presentation. Participants were allowed to register from 8:00-8:30 am then the pretest began at 8:30 am. The day ended at 4:00 pm with posttest and evaluations, totaling six and a half hours of training. The training presentation was provided by five different trainers all of whom were familiar with the training presentation information and had previous experience with conducting FBAs.

Dependent variable. The dependent variable for the current study is participants' scores on the test. Accuracy on the test is defined as the total number of problems correct over the total number of problems presented multiplied by 100. Accuracy was calculated for each participant both pre and posttest. For the Cronbach's alpha to be calculated the answers were changed to a zero for incorrect and a one for correct.

Design and Data Analysis

A Cronbach's alpha was calculated to examine the test's internal consistency and ensure that all test questions were related in a reliable manner. Cronbach's alpha

compares pairwise correlations between test items and, once calculated, results in a score between zero and one. Typically, a score of .80 or higher indicates good internal consistency and .60-.70 indicates acceptable internal consistency.

An analysis of variance (ANOVA) was calculated to compare test scores among different trainers and to determine if these variables had different outcomes as a result of the training presentation. An ANOVA is a statistical test typically used to compare three or more means. This is preferred over running multiple t-tests, which could result in an increased chance of committing a type I error (rejecting a null hypothesis that is actually true).

An analysis of covariance (ANCOVA) was calculated to compare test scores among different trainers and to determine if these variables had different outcomes as a result of the training presentation. An ANCOVA is a statistical test that examines if certain factors (i.e., site or trainer) have an effect on the outcome variable (i.e., test scores) after eliminating any potential covariates.

Results

The internal consistency of test items was examined using a Cronbach's alpha on pre and post tests. Results indicated moderate internal consistency among test items, for the pretest was $\alpha = .73$ and posttest was $\alpha = .69$. This means that all test questions were related in a reliable manner and that they were measuring similar things.

A one-way analysis of variance was conducted to compare participants' test scores among different sites and trainers. At an alpha of .01, results show that there are significant differences among participants' test scores as a result of the training presentation, $F(13, 237) = 7.16, p < .001$. To further analyze this significant difference, a

Cohen's d was ran to determine the effect size, which indicated a small effect size, $R^2 = .28$. The overall mean test score at pretest was only 53% correct ($M = 53.03$, $SD = 19.85$). At posttest, the overall mean correct percent was 73% ($M = 73.02$, $SD = 17.37$). Although the percentage correct at posttest was still low, it was significantly higher than the percent correct at pretest and was almost a passing score if one were to think of it in a traditional grading system.

An analysis of covariance (ANCOVA) was conducted on participants' test scores to control for any variance the trainers may have contributed. At an alpha of .05, results show that there are no significant differences among the test scores of participants across the different trainers, $F(13, 1) = 7.24$, $p = .06$. The location of the training accounted for 29% of the total variance in participants' test scores.

For all trainers, the mean correct percentage on the test increased from pretest to posttest. For trainer one (i.e., who conducted two trainings), the mean percentage correct increased from pretest ($M = 52.97$) to posttest ($M = 69.75$) by 17%. For trainer two (i.e., who conducted two trainings), the mean percentage correct increased 32% from pretest ($M = 42.80$) to posttest ($M = 74.71$). For trainer three, the mean percentage correct increased from pretest ($M = 61.40$) to posttest ($M = 74.52$) by 13%. For trainer four, the mean correct percentage increased 24% from pretest ($M = 50.00$) to posttest ($M = 73.86$). For trainer five, the mean percentage correct from pretest ($M = 49.63$) to posttest ($M = 71.30$) increased 22%.

Therefore, regardless of the training location, participants earned higher scores on the posttest than the pretest. This suggests the training information increased participants' knowledge on FBAs and consequently increased test scores rather than the

trainer impacting test scores. Although this did not reach a level of significance, it was approaching significance. Alternatively, the results could have been due to a small sample size (N = 251). The pretest scores had a difference of 18.6% (range of 42.8-61.4%) and a difference of 19% at posttest (range of 13-32% increase), which could be due to some trainers having more growth in which to obtain (e.g., less restriction of range in values). However, an alternative way of examining the data suggests that the pretest range across trainers had a wider range of variability (18.6%), which may suggest participant differences. The posttest range across trainers had a smaller range of variability (4.96%). This may indicate that one of the benefits of the training is that it reduced the participant variability in that participants across the state ended with similar results (i.e., knowledge base).

Results could have also been influenced by the fact that the test was measuring increased knowledge on information which was only in one day of training. Therefore, there is a limit on the amount of information which participants could absorb in one day. Participants were not given any opportunity to study or review training information prior to the posttest and therefore it could have underestimated participants' true increase in knowledge. Finally, the current study cannot rule out variables of trainer education, knowledge, experience, or participant education, knowledge or experience, or the experiences that occurred during the training, as potential factors in the overall results.

Discussion

The current study sought to examine if educators would increase their knowledge on FBAs from pretest to posttest, if different trainers had different outcomes for knowledge, and if the test used to measure increased knowledge had good internal

consistency. Findings suggest that educators' knowledge of FBAs increased significantly as a result of the training. In addition, these findings were consistent across all test sites and all trainers, which suggests that the trainers did not account for any significant differences found among participants' tests scores. Finally, the test used to measure knowledge had moderate internal consistency.

The present study found results similar to those conducted previously on FBA trainings. For instance, previous research conducted by Iwata et al. (2000) suggests that educators can be taught to successfully complete FBAs. The current study's results suggest support for this idea because educators' knowledge of FBAs did increase from pretest to posttest as a result of the training. In addition, Gable et al. (2003), like the current study, conducted a series of FBA workshops to train educators on conducting FBAs appropriately. With training, educators increased their knowledge in FBAs and consequently found a decrease in the number of behavioral incidents (Gable et al., 2003).

Training educators to complete FBAs has shown to increase their knowledge significantly and thus improve behavior in schools (Iwata et al., 2000; Gable et al., 2003). However, Weber (2005) stated that many of these trainings did not address the legal implications for conducting FBAs in schools nor did they provide information about the procedures for conducting FBAs. For this reason, the current study was necessary and expanded upon previous research since it addressed both of these issues. In addition, the current study was also conducted on a state-wide PBIS training with no cost to the participants to attend whereas previous research was either conducted within a school district or cost participants to participate.

Participants in the current study were found to increase their knowledge in conducting FBAs as a result of participating in Day 3 of the FBA training. A possible limitation of the current study is that, even though educators were shown to increase their knowledge in conducting FBAs appropriately, this is not to say that these educators will apply this knowledge when conducting FBAs in their schools. However, the obvious increase in knowledge suggests this was lacking prior to the training, so the current knowledge base could at the very least serve as a starting point for conducting FBAs appropriately.

To afford participants the opportunity to apply and practice their newly gained FBA knowledge, the training presentation included two vignettes. Both vignettes included information regarding students' gender, grade, age, and included a graph of collected data. The second vignette allowed participants to practice decision-making based on a separate referral but provided step-by-step guidance for appropriate decision-making. This allowed participants to work through the vignette to determine the appropriate decision. This built upon previous research which a) did not allow participants a chance to apply and practice skills, with an opportunity for feedback, or b) only provided case studies to allow participants to practice.

Including vignettes and offering participants an opportunity to apply and practice skills potentially enhances the participants' knowledge throughout the training. As participants are completing the vignette, they have the opportunity to ask questions that arise as they are applying these skills in a realistic situation, which provides alternative formats for them to go beyond just acquiring knowledge but applying it. Even further, getting feedback from trainers can ensure participants are practicing the skills correctly

and will be more likely to use the skills appropriately once they are to use them in their districts. In addition, this potentially increases generalization of skills gained.

Training is necessary to inform educators how to conduct FBAs in accordance with the law and so that they are aware of and follow the procedures for conducting FBAs to obtain desired outcomes (Ervin et al., 2001; Nelson et al., 1999). Future research should continue to further explore the effects that FBA trainings have on educator's ability to conduct FBAs and incorporate a follow-up integrity check to ensure educators are generalizing their increased knowledge once they return to the school setting. Once an educator completes an FBA post-training, he/she could complete a questionnaire that the trainers had developed and answer questions regarding the FBA procedures they followed. The questionnaire should be returned to the trainers who could then examine and analyze this data. This would provide useful information as to whether or not the skills are generalizing to the school setting.

Expanding upon this idea even further, future research could have trainers follow up with participants and ask them to submit a completed FBA post-training. This would afford trainers the opportunity to evaluate the integrity of the FBA with a standardized evaluation tool. The standardized evaluation tool can consist of the essential components of the FBA (e.g., appropriate operational definition of target behaviors, identification of antecedents and consequences, and summary statements) to ensure all components were competently conducted. School systems will continue to benefit from FBA trainings. As educators' knowledge in conducting FBAs increases, their ability to conduct FBAs successfully will improve, and behavioral problems in schools will consequently decrease.

Five different trainers conducted the FBA training in various locations and were trained on presenting the information provided in the PowerPoint slideshow. Trainers were expected to follow the slideshow as closely as possible and not provide educator's with their own experiences or lectures. However, questions from participants could have sparked discussion in training, and information could have been provided in the subsequent answer which was not provided in the remaining training sessions. Therefore, another limitation is that participants in this particular training may have gained additional information not included in the training presentation slideshow or vignettes and hence not provided to other participants in other training sessions. This could influence the knowledge gained in a particular training session. Although statistical analyses were ran to control for this factor and results yielded no significant findings, this could be viewed as an additional limitation in the current study. Future research should control for this factor by a) utilizing only one trainer across different training locations or b) reserving a question and answer session for participants only after the posttest has been administered.

The present study was conducted in one southern state and no additional states. Although this expanded upon previous research in which a study was conducted solely in a northeastern region (Gabel et al., 2003), this could be a limitation of the current study. Future research should address this concern and provide FBA trainings in a number of regions and states.

The internal consistency of test items in the current study was found to be moderate. Although this was an acceptable level of internal consistency and supported the notion that test items were all related to one another, future studies could strive for a

higher level of internal consistency. Doing so would expand upon the current study and provide additional support and knowledge in this area. Aiming for higher internal consistency would ensure that all test items were closely related to one another and that the test was reliably measuring increased knowledge. Giving a test with higher internal consistency to participants pre and post FBA training, with the assumption that it is measuring increased knowledge, would allow researchers to confidently conclude that the training reliably increased participants' knowledge. Future research could add items to the test, make items only multiple choice, as well as potentially using answers from the vignette as ways to enhance the reliability of the test and training.

Additionally, future research should conduct an item analysis on the pretest and posttest measure to examine if any items were missed consistently among participants. This would provide beneficial feedback regarding the content of test items and would afford insight as to what information from the training participants were not "absorbing" or not covered by the trainer adequately. Likewise, an item analysis would also reveal if any items were potentially either "too easy" or "too difficult."

In conclusion, the study was the first to examine statewide training on FBAs that used the same format along with vignettes. The results did increase knowledge across trainers and overall across the state. However, more training as well as different formats of training are needed in the future.

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Appendix A

Mississippi Department of Education
Office of Curriculum & Instruction

Positive Behavior Intervention an Supports (PBIS) throughout the Tiers

Day 3

 1

Agenda

- 8:00 – 8:30 Registration/ Breakfast
- 8:30 – 9:00 Pre-Test / Review Questions from of Module 1
- 9:00 – 10:15 Functional Behavior Assessments
- 10:15 – 10:30 Break
- 10:30 – 11:45 Behavior Intervention Plan / Workgroup Activity
- 11:45 – 12:45 Lunch
- 12:45 – 1:30 Graphical Display and Progress Monitoring
- 1:30 – 2:15 Using FBA's and BIP's for Appropriate Decision Making / Evaluation of Data
- 2:15 – 2:30 Break
- 2:30 – 3:30 Evaluation of Data / Workgroup Activity
- 3:30 – 4:00 Post-Test / Evaluations

 2

Review from Module 1

- What plans have you been able to make since Module 1?
- What is now a priority for your district or each school?
- How can we set goals that can be accomplished and built upon for this or next school year?
- What steps do you need to take to attain these goals?
- Do you need assistance or PD?

 3

Tier 3 Essential Elements

System of behavioral support (school and district level)

Strategic/targeted intervention and supplemental instruction supported by scientifically based research in behavior/emotional concerns

 4

Tier 3 Behavior Interventions

- Before developing a Tier 3 Behavior Intervention, a Functional Behavior Assessment (FBA) should be conducted.

 5

FBA

- An FBA is an assessment utilized to evaluate a child's behavior and determine the purpose or function of that behavior.
- The result of an FBA should always be the development and implementation of a behavior intervention plan.

 6

FBA Process

- Describing the behavior in observable terms
- Determining the setting and time of day when the behavior occurs
- Identifying the events prior to the behavior occurring
- Analyzing the consequences which maintain the behavior, that is, what events follow an occurrence of the behavior
- Developing strategies to reduce the inappropriate behaviors and teach positive alternative behaviors

 7

What FBA is NOT!

- **An FBA is not conducted to determine eligibility** but "to determine the educational and programming needs for students with disabilities." (Yell and Katsiyannis, 2000)

 8

What FBA is NOT!

- **FBA is more than "a 10-minute exercise in marking boxes and filling in the blanks."** (Groeschel, 1998)
  - Merely going through the process of an FBA to satisfy the letter of the law "will not be sufficient if the FBA doesn't lead to quality programming." (Yell and Katsiyannis, 2000)

 9

What FBA is NOT!

- **"An FBA is not an intervention in and of itself."** (Quinn, 2000)
  - "It is a **tool** for identifying the intervention with the highest potential for changing the current behavior in the current setting."(Nelson, Mathur, and Rutherford, 1999).

 10

Awareness of Legal Issues

Legal Wording for students in special education regarding FBA's

- The first 3 slides include wording regarding removal from general education setting followed by procedures to follow.

 11

Individuals with Disabilities Education and Improvement Act 2004 - Discipline

- (1) Removal for ***violation of code of conduct*** to an appropriate interim alternative educational setting, another setting, or suspension ***for not more than 10 school days***

 12

Individuals with Disabilities Education and Improvement Act 2004 - IAES

- (2) Removal to an interim alternative educational setting ***for not more than 45 school days*** without regard to whether the behavior is determined to be a manifestation of the child's disability,
  - if the child: (1) ***carries a weapon to or possesses a weapon at school, on school premises, or to or at a school function under the jurisdiction of an SEA or an LEA***
  - if the child: (2) ***knowingly possesses or uses illegal drugs, or sells or solicits the sale of a controlled substance, while at school, on school premises, or at a school function under the jurisdiction of an SEA or an LEA***
  - if the child: (3) ***Has inflicted serious bodily injury upon another person while at school, on school premises, or at a school function under the jurisdiction of a SEA or an LEA***

 13

Individuals with Disabilities Education and Improvement Act 2004 – Pattern of Behavior

- (5) The child has been subjected to a series of removals that constitute a ***pattern*** (i) because the ***series of removals total more than 10 school days in a school year*** (ii) because the child's ***behavior is substantially similar to the child's behavior in previous incidents that resulted in the series of removals***; and (iii) because of such additional factors as the ***length of each removal, the total amount of time the child has been removed, and the proximity of the removals to one another***

 14

Individuals with Disabilities Education and Improvement Act 2004 – FBA & BIP

- A child with a disability who is removed from the child's current placement for violations described above must receive a ***functional behavioral assessment and behavioral intervention services and modifications***, that are designed to address the behavior violation so that it does not reoccur.
- **U.S.C.Section 1415 (k) (1) (D) (ii)**
- **§300.530 (d) (1) (ii)**

 15

Individuals with Disabilities Education and Improvement Act 2004 – Manifestation Determination

- (1) **Within 10 school days** of any decision to change the placement of a child with a disability because of a violation of a code of conduct, the LEA, the parent, and relevant members of the child's IEP Team must review all relevant information in the student's file, including the child's IEP, any teacher observations, and any relevant information provided by the parents to determine
- (i) ***If the conduct in question was caused by, or had a direct and substantial relationship to the child's disability or***
- (ii) ***If the conduct in question was the direct result of the LEA's failure to implement the IEP***

 16

Individuals with Disabilities Education and Improvement Act 2004 – Manifestation Determination

- (1) If the LEA, the parent, and relevant members of the IEP Team make the determination that the conduct was a manifestation of the child's disability, the IEP Team must (1) (i) ***conduct a functional behavioral assessment before the behavior that resulted in the change of placement occurred, and implement a behavioral intervention plan for the child or***

 17

Individuals with Disabilities Education and Improvement Act 2004 – Manifestation Determination

- (2) If the LEA, the parent, and relevant members of the IEP Team make the determination that the conduct was a manifestation of the child's disability, the IEP Team must (1) (ii) ***review the behavioral intervention plan, and modify it, as necessary, to address the behavior, and***

 18

Individuals with Disabilities Education and Improvement Act 2004 – Manifestation Determination

- (3) If the LEA, the parent, and relevant members of the IEP Team make the determination that the conduct was a manifestation of the child's disability, ***the IEP Team must return the child to the placement from which the child was removed unless the parent and the LEA agree to a change of placement as part of the modification of the behavioral intervention plan.***
- ***Note: Students who have been placed in an interim alternative educational setting for weapons and drug violations or infliction of serious bodily injury would remain in the interim alternative educational setting.***

 19

Individuals with Disabilities Education and Improvement Act 2004 – FAPE

- (1) School personnel ***are not required to provide educational services*** to the child during this period of removal because the change ***has not been longer than 10 days or constituted a change in placement*** as long as ***services are not provided to a child without disabilities who has been similarly removed.***

 20

Individuals with Disabilities Education and Improvement Act 2004 – FAPE

- (2.a.) For a child with a disability whose placement has exceeded 10 school days, school personnel will ***consult with at least one of the child's teachers*** to determine the extent of services necessary to enable the child to progress in the general curriculum and advance toward achieving IEP goals

 21

Individuals with Disabilities Education and Improvement Act 2004 – FAPE

- (2.b.) For a child with a disability whose placement has exceeded 10 school days, school personnel ***will provide services to enable the child to progress in the general curriculum and advance toward achieving IEP goals***

 22

- 3) The child's ***IEP Team determines the interim alternative educational setting for services*** under §300.530(c), (d) (5), and (g).

 23

Individuals with Disabilities Education and Improvement Act 2004 – Parent Appeals

- The child ***must remain in the interim alternative educational setting during appeals*** pending the decision of the hearing officer or until the time period specified in §300.530 (c) or (g) has expired. **§300.533**

 24

Violations of the Law

Failure to adhere to the requirements of the law will result in the denial of FAPE and likely lead to due process hearings, litigation, and application of legal sanctions against the school district.

(Yell & Katsiyannis, 2000)

 25

Possible Reasons for Violations

- Lack of knowledge of IDEA requirements
- Lack of training on FBAs and BIPs
- Lack of administrative support
- Inconsistent with orientation
- Ambivalence toward requirements of the law

 26

When to Conduct an FBA

An FBA should be conducted at the following times:

- At the beginning of Tier 3 when the student's problem behavior impedes the learning of self or others
- When there is a known history of problem behavior
- When the student's suspensions approach 10 cumulative days
- Before the student's placement into an alternative education setting
- When the student's behavior presents a danger to self or others

 27

Purpose of FBA

"The general purpose of functional behavioral assessment is to provide the IEP team [or TST] with additional information, analysis, and strategies for addressing undesirable behavior, especially when it is interfering with a a child's education. The process involves some variant of **identifying the core or "target" behavior; observing the pupil (perhaps in different environments) and collecting data on the target behavior, antecedents and consequences; formulating a hypothesis about the cause(s) of the behavior; developing an intervention(s) in changing the behavior."**

(Independent School District No. 2310, p. 333)

 28

Violations of the Law: National Due Process Hearings

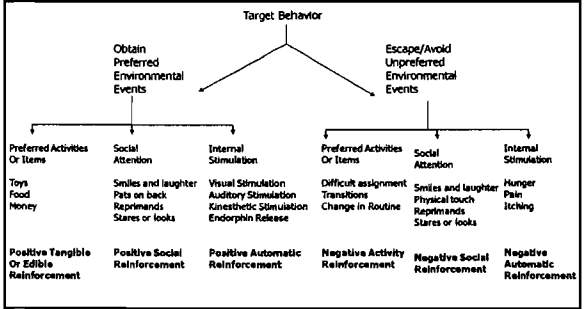
School districts lost in 13 out of 14 (94%) state level due process hearings.

School districts failed to conduct an FBA and develop a BIP when is was required by IDEA in 11 of the cases.

School districts lost in 3 of the cases for development of an inadequate FBA.

 29

Functions of Behavior



 30

	Positive (add stimulus)	Negative (take away stimulus)
Increase Behavior	Positive Reinforcement – adding stimulus (typically preferred) to increase the future occurrence of the behavior	Negative Reinforcement – taking away a stimulus (typically not preferred) to increase the future occurrence of the behavior
Decrease Behavior	Punishment – adding stimulus (typically not preferred) to decrease the future occurrence of the behavior	Response Cost – taking away a stimulus (typically preferred) to decrease the future occurrence of the behavior

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Examples

- Positive Reinforcement: when the child complies with teacher directions, the child is given extra time on the computer
- Negative Reinforcement: after your child cleans their room appropriately without being told, you take away their chore of taking out the garbage.
- Punishment: following a child's noncompliance, the child is given the chore of washing the windows
- Response Cost: following a child's noncompliance, their cell phone is taken away

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- Participants: provide other examples of each
  - Positive Reinforcement
  - Negative Reinforcement
  - Punishment
  - Response Cost

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Key Components of an FBA from Empirical Literature

- Clear description of the problem behavior
- Identification of the antecedent events, times, and situations that predict when the problem behavior will and will not occur.
- Identification of the consequences of the problem behavior.
- Development of hypotheses and summary statements that describe the problem behavior and its functions.
- Collection of data from a variety of sources (interviews, direct observation data, etc).

(O'Neill, Horner, Albin, Sprague, Storey, & Newton, 1997)

 34

Data Collection

- When beginning an FBA, start with collecting data:
  - Observations
  - Teacher information
  - Parent information
  - Student information

 35

Direct Observation: Non-Systematic Procedures

- **Narrative Recording**
  - record events like a play script
    - useful for identifying potential behaviors for systematic observations
    - can also provide clues to possible intervention components
  - good homework assignment for parents and teachers

 36

Direct Observation: Non-Systematic Procedures

- **Sequence or Contingency Analysis (A-B-C)**
  - break down the narrative recording into (A) antecedents, (B) behaviors, and (C) consequences
  - helps to ***form hypotheses about functional relationships***, behavioral chains, etc.
    - **correlational conclusions**
  - also helpful for identifying potential behaviors for systematic observations
  - provides clues to possible intervention components
  - another good homework assignment for parents and teachers

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ABC Example

Date/Time	Setting Events	Antecedent	Behavior	Consequence	Effect
When did the behavior occur?	Where did the behavior occur?	What happened immediately prior (i.e., triggered) to the behavior?	Describe the problem behavior	What did you do or what happened after the behavior occurred	What effect did the consequence have on the frequency, duration, &/or intensity of the behavior?

 38

Target Behaviors & Behavioral Definitions

- **Operational Definition**
  - Should pass the **Stranger Test**
  - Should <u>not</u> be **Dead Man** behaviors
  - Replacement behaviors should be **<u>proactively stated</u>** to reflect what the student should be doing as opposed to he or she should not be doing.

 39

Examples of Operational Definitions

- Off-task
- Students eyes break contact with the assignment or teacher during lecture for a period of more than 5 seconds during each 10 second interval.

 40

Examples

- Noncompliance
- Student fails to begin the task within 5 seconds of the adult directive.

 41

Examples

- Tantrum
- Aggression
- Self-Injury
- Student hits or kicks (self, others, objects), screams, says cuss words, pulls hair, scratches (self or others), breaks objects, plops down on floor.

 42

Examples

- Out-of-Seat
- Student's bottom breaks contact with the seat or floor for a period of 5 seconds.

 43

Examples

- Talking without permission
- Student speaks to the teacher or peers without approval; student calls out answers without raising hand.

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Systematic Observation

Frequency count or Event Recording

- involves counting the frequency of occurrence of the target behavior(s) during certain observation periods (minutes, hours, etc)
- best suited for ***discrete*** or ***event behaviors of low rate***
  - with a clear beginning and end
  - and relatively uniform duration
- should not be used with high frequency behaviors due to threat of observer drift

 45

Frequency Count Example

Day	Frequency Count
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

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Systematic Observation

Duration Recording

- used to obtain an estimate of the ***average time that has elapsed from beginning to the end of the behavior***
- record the elapsed time from the beginning to ending of each behavior occurrence
  - use a stopwatch to time each occurrence from beginning to end
- can be difficult to record because observer may not know exactly when the behavior starts and stops
- can be reported as "true" duration, percentage, or average
- Percentage = $\frac{\text{Total Time Engaged in the Behavior}}{\text{Total Time of the Observation Period}} \times 100$
- Average Duration = $\frac{\text{Total Time Engaged in the Behavior}}{\text{Number of Occurrences of Behavior}}$

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Duration Form

Time		Duration
Behavior Onset	Behavior Offset	

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Systematic Observation

Latency Recording

- measures the elapsed time between the occurrence of the signal (discriminative stimulus) and the initiation of the behavior
- stopwatch is also need for latency recording
- can be presented as "true" latency, percentage, or average
- Percentage = $\frac{\text{Total Time to Start Behavior}}{\text{Total Time of Observation Period}} \times 100$
- Average Latency = $\frac{\text{Total Time to Start Behavior}}{\text{\# of Occurrences of Behavior}}$

Latency Form

Time		Latency
Prompt	Behavior Onset	

Systematic Observation

Interval Recording

- used from **continuous behaviors**
  - beginning and end is difficult to judge (off-task)
  - variable duration
- divide the observation period into equal intervals
  - smaller intervals are generally more accurate
  - 10 second or 15 second are most common
  - usually have observation and record intervals
  - used cued by some signal (tape)
- for each interval, record the occurrence or nonoccurrence

Two Types of Interval Recording

- ***Partial-Interval Recording***: recording each interval as an occurrence if the target behavior occurs any time during the observation interval; tends to ***overestimate*** the actual occurrence of behavior.
- ***Whole-Interval Recording***: coding each interval as an occurrence only if the target behavior occurs throughout the entire interval; tends to ***underestimate*** the occurrence of behavior
- Percent of Intervals = $\frac{\text{Number of Intervals of Occurrence}}{\text{Total Number of Intervals Observed}} \times 100$

Systematic Observation

Momentary Time Sampling (MTS)

- record occurrence or nonoccurrence at beginning or end of interval
- sometimes refereed to as "**Spot Checking**"
- helps to cut down on observer drift or fatigue
- generally more accurate than Partial- or Whole-Interval Recording
  - creates a balance between over- and underestimation
- major problem is making sure that independent observers make their observations at the same time
- use same formula for other types of interval recording

Reliability

- assessed by ***interobserver agreement*** (IOA)
  - Question: Do two independent observers, looking at the same behavior at the same time, record the same event?
  - Also called interobserver reliability (IOR)
  - 80% agreement is minimum acceptable reliability
  - IOA should be conducted on 25%-33% of the observations evenly distributed across all phases of the research project
    - Best to schedule IOA observations prior beginning data collection
- IOA = $\frac{\text{\# of Intervals of Agreement}}{\text{Total Number of Intervals}} \times 100$

Validity of observations

- most important influence is ***reactivity to observer presence***
  - warn parents and teachers not to announce your presence
  - do not become a distraction in the environment
  - allow for habituation

 55

What "sets off" behavior?

Antecedent - *a stimulus or event that precedes a behavior.*

Three Antecedent Events

- **Establishing Operation**
- **Setting Event**
- **Discriminative Stimulus**

 56

Establishing Operation

- An antecedent variable that temporarily alters the effectiveness of a reinforcer for a behavior.
  - e.g., water tastes better after working out for a period of time because you are dehydrated.
  - Other Examples?

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Setting Event

- An antecedent variable that is removed in time and place from the behavior but is still functionally related to the behavior.
  - e.g., getting into a fight on the bus ride to school may set the stage for not following teacher instructions at school.
  - Other Examples?

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Discriminative Stimulus

- An antecedent event that signals that a response with be reinforced.
  - The behavior that is reinforced in the presence of the discriminative stimulus is said to be under stimulus control.
  - e.g., students change class when the bell rings at school.

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What "maintains" behavior?

Consequences

- Positive reinforcement – obtain desired activities, events, reinforcers, etc.
- Negative reinforcement – escape or avoid nonpreferred activities, events, reinforcers, etc.

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Empirically- Supported Functions of Behavior

Function - *purpose the behavior serves for the individual*

Functions of Behavior based on empirical research

Obtain
- Social Attention, Assistance, Communication
- Access to Tangibles or Preferred Activities
- Internal Stimulation

Escape or Avoid
- Aversive Tasks or Activities
- Other Individuals
- Internal Stimulation

 61

Behavioral Assessment

- An umbrella term which includes a wide range of objective procedures designed to measure some aspect of behavior-environment relationships.
  - Includes functional assessment and functional analysis procedures.

 62

FBA Methods

- Descriptive Analysis
- Functional or Experimental Analysis

 63

Descriptive Analysis

- Use of interviews and direct observations to develop hypotheses about the function of problem behavior.
  - Correlational approaches because environmental events are not directly manipulated.

 64

Functional Analysis

- The systematic manipulation of environmental variables (i.e., antecedents and consequents) in order to identify a causal relationship between the performance of target behaviors and the those environmental variables.

 65

- A functional analysis provides additional information regarding behavior and more specific information for developing a BIP.
- However, it can be difficult to conduct in a school setting as well as take additional time.
- An intervention can be developed following a descriptive analysis and can be verified once the intervention is begun. Regular meetings should be conducted to determine intervention effectiveness and possible changes to intervention.

 66

Types of Functional Analysis Conditions

- Antecedent-based Conditions – Setting up conditions where the antecedents (i.e., adult instructions, amount of adult attention, level of task demand, etc.) are manipulated to evaluate their impact on behavior.

 67

Types of Functional Analysis Conditions

- Consequent-based Conditions – functional analysis conditions in which the consequent events (i.e., social attention for teachers or peers, allowance of escape from tasks) are manipulated in order to evaluate their effect on behavior.

 68

Types of Functional Analysis Conditions

- Hypothesis-based Conditions: functional analysis conditions in which only the hypothesized functions of behavior are manipulated.

 69

Timelines for FBAs

- FBAs should be started within **10 business days** when the student
- BIPs based on the FBA must be implemented as quickly as possible

 70

Phases of FBA and PBS

- Descriptive Phase
- Interpretive Phase
- Verification Phase
- Treatment Implementation & Monitoring

 71

Phase I: Descriptive Phase

- Indirect Methods
  - Interviews - Teacher, Parent, Student
  - Rating Scales
  - Academic Record Review
  - Discipline Record Review
  - Previous Intervention Attempts

 72

FBA Interviews

- There are several published interviews available. Examples include:
  - FAI
  - FAIR-T

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Phase I: Descriptive Phase

- Direct Methods - Direct Observations
  - Scatter Plot
  - ABC Assessment
  - Frequency or Event Recording
  - Interval Recording
  - Rating Forms

 74

Phase II: Interpretive Phase

Involves the development of hypothesis or summary statements about the triggers (antecedents) setting off the behavior and events (consequences) maintaining behavior.

 75

Phase III: Verification Phase

Direct changes are made in the environment to test the hypothesis or summary statements.

- Functional or Experimental Analysis
- Intervention Testing

 76

Phase IV: Intervention Development & Monitoring

- Focus on increasing positive behaviors
- Focus on teaching skills (replacement behaviors)
- Focus on making problem behaviors inefficient, ineffective, and irrelevant
- Focus on proactive instead of reactive strategies
- Monitored closely for integrity
  - Direct Observation
  - Intervention Checklists

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Checklist for Conducting Legally Correct and Educationally Appropriate FBAs and BIPs

- IEP team convened to conduct or appoint someone to conduct FBA.
- Persons conducting FBA are qualified.
- Parents are notified in time to provide input on assessment.
- FBA consists of:
  - Interviews with relevant parties (parent, teacher, student)
  - Multiple direct observations in a variety of settings
  - Functional or Experimental Analysis, if necessary
  - Summaries of hypothesis statements about function of behavior
- FBA conducted in a timely manner
- IEP team / TST develops an appropriate BIP based on FBA.
  - Proactive, antecedent strategies
  - Relevant consequent strategies, including regular discipline strategies designed to "teach" replacement behaviors

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BEHAVIOR INTERVENTION PLAN (BIP)

Linking FBAs to Intervention: Positive Behavioral Intervention Plans (BIPs)

"a behavior change program that **emphasizes teaching prosocial behaviors** to replace a student's inappropriate behaviors" (Drasgow et al., 1999)

"a plan that views problem behavior as **resulting from challenging social situations** for which the problem behavior represents a possible solution" (Yell, Katsiyannis, Bradley, and Rozalski, 2000)

"not focused on controlling the person, but instead on **redesigning the environment and building new skills** that make the problem behavior irrelevant, inefficient, and ineffective in the environment" (Drasgow et al., 1999)

Linking FBAs to Intervention: Positive Behavioral Intervention Plans (BIPs)

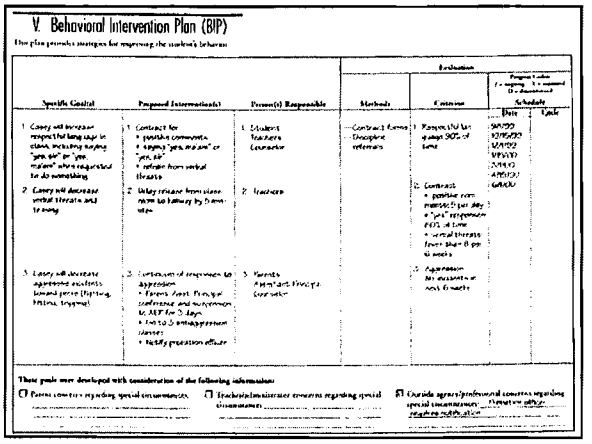
"key component of the BIP is the use of **multiple proactive strategies** aimed at **preventing problem behavior** before it warrants sanctions." (Drasgow and Yell, 2001)

"behavioral plans that describe acts of prohibited misconduct and then specific consequences for misbehavior are almost certainly **illegal because they are reactive.**" (Gorn, 1999)

Essential Components of the Behavioral Intervention Plan

- Observable and measurable description of the problem behavior **(Operational Definitions of Target Behaviors)**
- Identified purpose of the problem behavior as a result of the FBA **(Summary Statements and Rationale)**
- General strategy or combination of strategies for changing the problem behavior **(Predictor/Consequent Strategies and Teaching Strategies)**
- Written description of when, where, and how often the strategy will be implemented **(Routines)**
- Consistent system for monitoring and evaluating the effectiveness of the plan **(Treatment Monitoring)**
- Consistent system for monitoring the fidelity of implementation of the plan **(Treatment Integrity)**

- An example of a BIP is on the next slide. There is not one correct way to write a BIP. Some books have sample pages or you can create your own. The important part is that all essential components are present.



V. Behavioral Intervention Plan (BIP)

ACTIVITY

Create your own BIP

 85

REVIEW VIGNETTE

- Johnny, a male, kindergarten student was referred to the school psychologist due to classroom behaviors. The behaviors included off-task, talking out, walking around the room, verbally aggressive outbursts and tantrums and noncompliance.
- A tier 2 intervention had been recommended by the teacher support team and implemented by the teacher. The target behaviors for tier 2 were outbursts, noncompliance, and redirections to task.

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Target Behavior Definitions

- **Outbursts**: tantrums that include yelling and throwing items in the classroom across the room. This may also include kicking and hitting tables and chairs as well as throwing chairs.
- **Noncompliance**: failure to comply with teacher directions after 5 seconds
- **Redirections**: any instance of Johnny being off-task that required the teacher to either physically or verbally prompt him to get back to the current task. The task can include attending to the teacher while on the carpet, completing individual assignments, going back to his center activity, etc.

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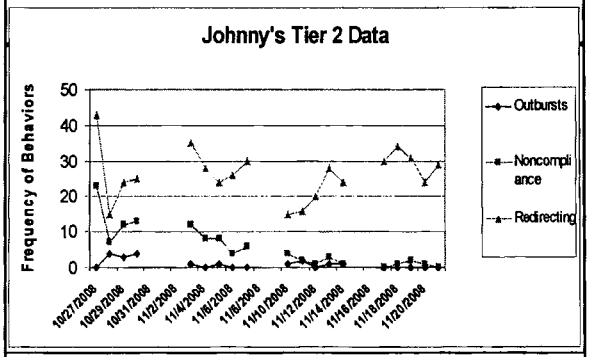
TIER 2 DATA



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Questions

Based on the information provided above answer the questions below.

1. Which behavior was the most problematic?

   _____

2. Does the Tier 2 intervention appear to be successful for any of the behaviors addressed? If so, which behaviors?

   _____

3. Which behavior(s), if any, should be targeted for Tier 3?

   _____

 89

- Review FBA information
- Review BIP's

 90

1. Who will implement the BIP?
2. When will progress monitoring occur and who will be in charge of it?
3. When will implementation of the intervention be observed (implementation integrity) and by whom?
4. What will your long term goal be for the target behavior?

 91

Essential Element of Tier 2 and Tier 3

Documentation of progress in target area(s) through a graphical display

- Data are present.
- Data are presented in a graph format for each student.
- Graph includes target behavior, actual performance, sessions, aim line, and goal line.

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- It is important to note, that the following information regarding graphical display of data and appropriate decision making should also be used when conducting interventions for students in special education.
- Why?
  - Because it is the appropriate way to conduct and evaluate ANY intervention!

 93

Components of the Graphical Display

- Phases
- Actual student performance
- Target behavior
- Sessions
- Aim line
- Goal line

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Progress Monitoring

Baseline Phase

- Period of no treatment (reflects natural state)
- Measures the target behavior of interest (also known as the dependent variable)
  - The dependent variable is measured the same way each time during baseline and once you begin implementing the intervention.
- Provides standard for evaluating the effect of the independent variable and determines if extraneous variables are operating (i.e., the control condition)

 95

Actual Student Performance

Graphical display includes a visual representation of the student's actual performance of the target behavior during baseline.

 96

Progress Monitoring

- Shouldn't change baseline until
  - Little variability
  - No trends
    - Unless the trend is in the opposite direction of expected effect
- Only change one variable at a time
- When a change in "phases" occurs, a dotted line should be placed on the graph representing a new phase.

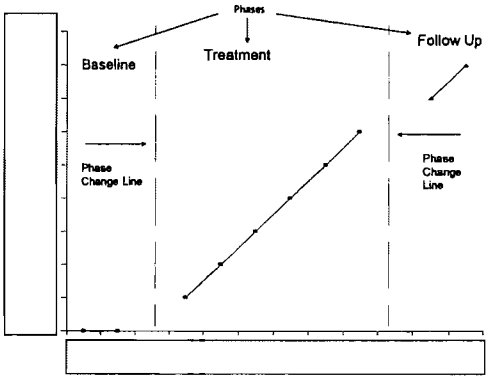
 97

Progress Monitoring

Treatment Phase

- Introduction of the independent variable
  - The variable that is manipulated.
  - The intervention, protocol, and/or instruction.
  - You determine the effects of the independent variable on the dependent variable.
  - Examples: Wilson Reading, Home-School Note, Head Sprouts, etc.
- Repeated measurement of the dependent variable continues.
- Graphical display includes visual representation of student performance of the dependent variable during intervention phase.

 98



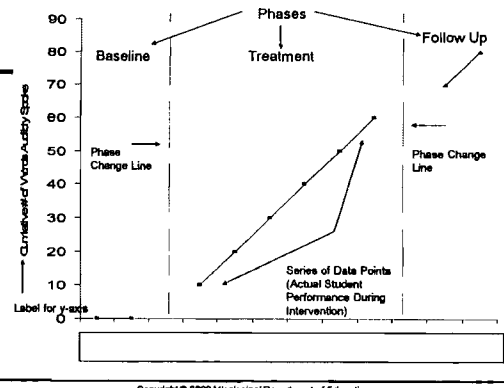
 99

Progress Monitoring

Target Behavior

- This is the behavior of interest that you are trying to change. (dependent variable)
- Target behavior is labeled on the vertical axis (y-axis) of the graph and this axis includes the quantitative value of each possible data point.
- Students' actual performance of the target behavior is placed on the face of the graph, represented by data points.
- Data points are connected by a line.
  - Datum versus Data
    - o Datum – single data point representing one measurement (rate, duration, latency, percentage, etc.) of the participant's behavior; singular
    - o Data – multiple measurements of the participant's behavior over time; a series of data points; plural (Tom's data are stable.)

 100



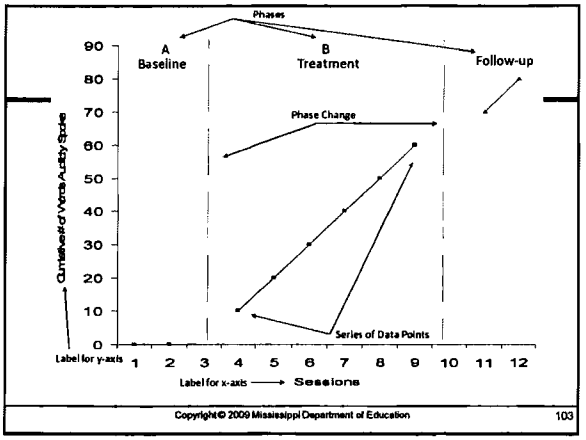
 101

Progress Monitoring

Sessions

- Sessions represent when the data were collected on the dependent variable.
- Sessions are typically numbered (e.g., 1, 2, 3, etc.).
- The graph sessions are placed on the horizontal or x-axis.
- Each session corresponds with one data point (i.e., student's performance of the dependent variable).

 102



 103

Aim line

- A line on the graph that represents the expected or desired progress of the target behavior (i.e., represents the target rate of growth as a result of the intervention).
- Aim line is drawn to connect student performance during baseline (median performance) to an end point (often the goal line).
- The aim line allows you to determine whether a student is making progress towards the goal within shorter increments of time.
- The aim line provides an anchor to assess progress at every data point. (Mississippi model of best practice = you need to know how well the student is progressing at least every five weeks.)

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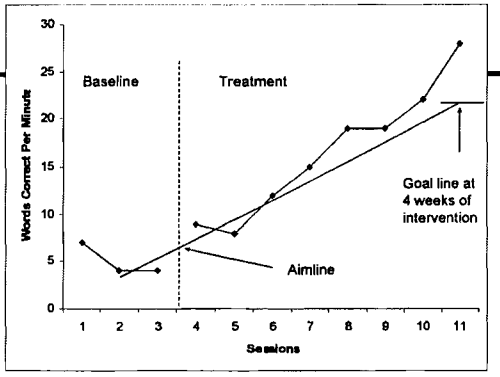
Goal line

- A place or line segment on the graph that represents the goal (e.g., level, frequency, percent, or rate at which the target behavior should be displayed)
- The goal line is drawn at a future point on the graph and therefore represents the desired level of response at some pre-determined point in time.
  - Pre-determined time typically represents a long-term goal (i.e., middle of year or end of year), but may also reflect a short-term goal.
    - Short-term goals should be modest and realistic.
- Goal level of performance = peers or empirical data.

 105



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Essential Elements Matrix: Tier 3

Appropriate decision-making.

- Decision-making is based on the student's current level of performance.
- Decision-making is based on slope/level/ROI.
- Decision-making incorporates a continuation, revision, or termination, if appropriate.
- Decision-making was made at the appropriate intervals (e.g., at 4 week intervals).

 107

Evaluation of Data

Primarily use visual analysis of graphic display to evaluate patterns in the series of data points

- Visual analysis
  - Matter of judgment
    - Emphasizes socially significant and readily discernable effects (considered by many to be better than statistical significance)
  - Intended to be conservative
    - This strict standard results in type 2 errors
      - Type 1 = accept when there is no relationship
      - Type 2 = reject when there is a relationship

 108

Visual Analysis of

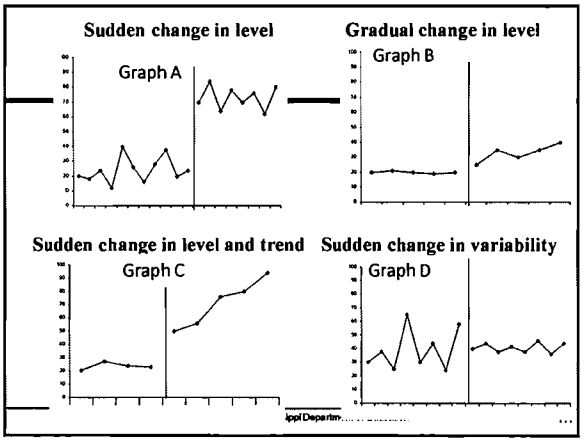
- **Level**:
  - Summary of central tendency
- **Trend/Rate of Improvement**:
  - Direction of change from beginning of series to the end.
    - Trend is the slope of the data
- **Variability**:
  - Spread of data points around level and trend
    - Dispersion

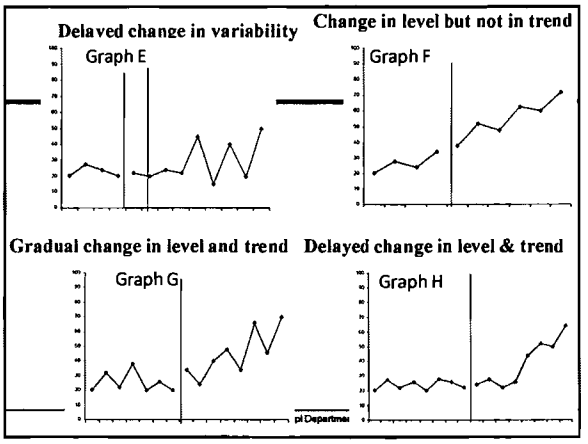
 109

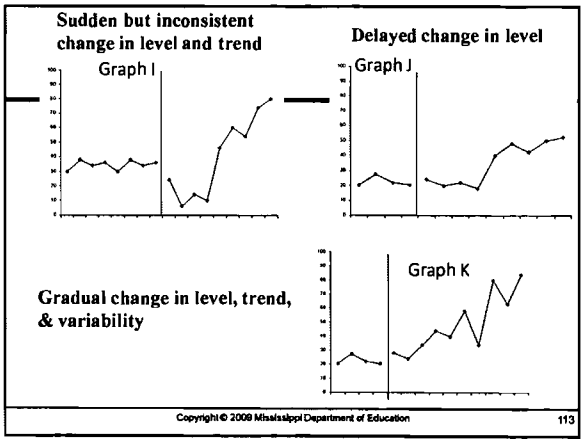
Visual Analysis

- Matter of judgment
  - Emphasizes socially significant and readily discernable effects (better than statistical significance)
- Intended to be conservative
  - This strict standard results in type 2 errors
    - Type 1 = accept when there is no relationship
    - Type 2 = reject when there is a relationship
- Evaluation of
  - Level
  - Trend/Slope/Path
  - Variability

 110







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Questions that can be answered with analysis of trend, level, and variability

- Does treatment work better than nothing at all?
- Does one treatment work better than another treatment?
- Which components of treatment are responsible for behavior change?
- What is the optimal level of intervention?

 114

What's missing?

- In each of the above samples we have everything we need but the anchors.
  - Without these anchors, the information is limited
  - With these anchors, decisions are much easier

 115

The need for an anchor

- Without norms and/or universal screening, progress monitoring data has limited use
- Data in isolation only tells us what students can do now
- We are also interested in
  - What they should be able to do
  - If they will likely achieve a "good" outcome

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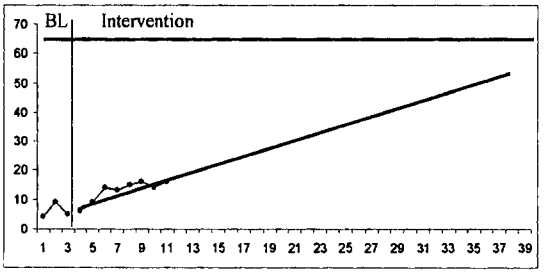


 117

Case Study

Problem Identification

- Teacher referred a student having a high frequency of problem behaviors.
- Problem Definition
  - The student:
    - Does not complete work
    - Does not comply with directives
    - Verbally threatens other students
- Long Range Goal
  - The student will be able to display appropriate behaviors 90% of the time.

 118

Case Study

Problem Certification

- Teacher collected data on problem behaviors.
- Another meeting was set up to analyze the problem.

 119

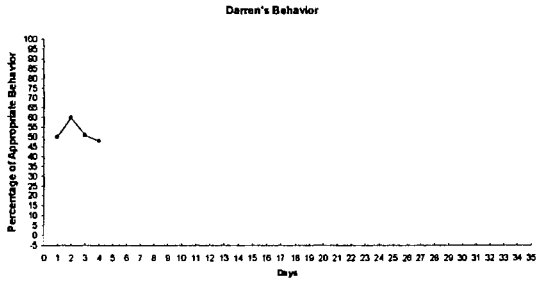
Case Study

Problem Analysis

- Did the problem exist?
- What did the problem look like?
  - Stable
  - Environmental factors
    - Antecedents
    - Consequences

 120

Case Study



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Case Study

Treatment Intervention Planning

- Short term goals
  - The student will be able to display appropriate behaviors.
    - 70%
    - 77%
    - 85%
    - 92%
- Prescribe an Intervention
  - Home-School Note

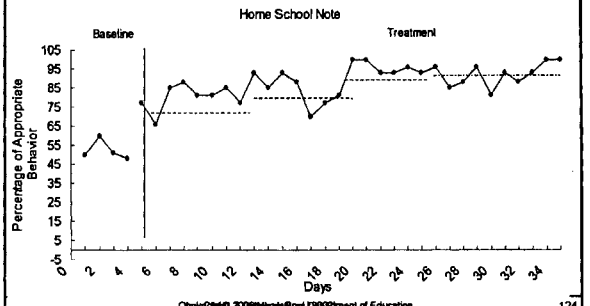
 122

Case Study

- Home-School Note
  - A sheet of paper with the objectives written
  - Points or signatures given throughout the day
  - Verbal feedback given to the student about behavior
  - The note is sent home for signature
  - Rewards either given at school or home
  - Rewards given based on a criteria

 123

Case Study



 124

Case Study

Treatment Evaluation

- Did the intervention(s) work?
- What is the next step?
  - What is our long range goals?
  - Do we need to cycle back through the problem identification, problem certification, problem analysis, and treatment evaluation?
  - Can we end the intervention or fade out the intervention?

 125

Essential Elements Matrix Tier 3

- Work Group Activity
  - Decision making
    - Based on the data presented, do you have sufficient data to make a decision about the intervention?
    - If so, is the intervention effective?
    - Will the intervention resolve the problem in an appropriate time frame?
    - Based on the data presented, will you continue, modify and continue, or terminate the intervention?
    - Based on the current trend, will the student meet the goal by the end of Tier 3?

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Case Study Vignette

- Egbert, a male, kindergarten student was referred to the school psychologist due to classroom behaviors. The behaviors include cussing frequently in class, not completing assignments, and "bothering" other students. Bothering was later determined to be poking and touching other students.
- Based on classroom observations, the average percent of appropriate behavior for the class is typically at about 85%.

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Progress monitoring decisions:

Based on the information provided above answer the questions below.

1. List and define your target behavior(s).
2. How do you plan on evaluating intervention effectiveness? What, specifically, will be measured?
3. How frequently will you measure progress? Whose progress will be measured?
4. What day or days of the week will progress monitoring occur?
5. When will implementation of the intervention be observed and by whom?
6. What will your long term goal be for the target behavior?

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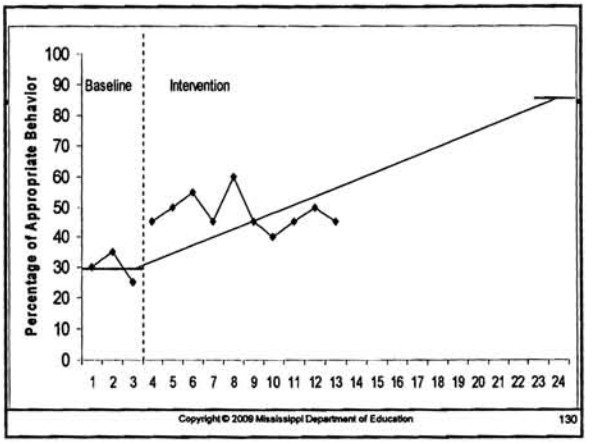
Progress Monitoring Data

- **Baseline data**: 30, 35, & 25
- **Intervention data**: 45, 50, 55, 45, 60, 45, 45, 50, 55, & 50
- Using the data above create a graph which plots the intervention results.
- Include appropriate **axis labels**, **phase labels**, **phase change lines**, **aim line** and **goal line.**

 129



 130

Appropriate Decision Making

1. Based on the data present do you have sufficient data to make a decision about the intervention?
2. If so, is the intervention effective?
3. Will the intervention resolve the problem in an appropriate time frame?
4. Based on the data presented will you continue the current intervention, modify and continue or terminate the intervention? Why?
5. Based on the current trend, will Egbert meet the goal by the end of Tier III?

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QUESTIONS/COMMENTS?

- Post-Test
- Evaluations

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Appendix B

Positive Behavior Intervention and Supports (PBIS) throughout the Tiers – Module 2 Pre-Test

Site: _____

Name: _____

School: _____ District: _____

1) A _____ is an assessment utilized to evaluate a child's behavior and determine the purpose or function of that behavior.
    a. Comprehensive Assessment
    b. Behavior Intervention Plan
    c. Functional Behavior Assessment
    d. Functional Analysis
2) The result or outcome of a functional behavior assessment should always be the implementation of a/an _____.
3) Read the following statement: A child loses their cell phone due to disrespectful behavior. This statement is an example of what?
    a. Positive Reinforcement
    b. Negative Reinforcement
    c. Punishment
    d. Response cost
4) Read the following statement: After a child cleans their room appropriately without being told, their chore of taking out the garbage is taken away or removed.
    a. Positive Reinforcement
    b. Negative Reinforcement
    c. Punishment
    d. Response cost
5) What is used to assess the validity of an observation?
    a. Interval Recording
    b. Interobserver Agreement

c. Antecedent Manipulation

d. Narrative Observation

6) List two empirically supported Functions of Behavior.

a. _____

b. _____

7) List two times when a Functional Behavior Assessment should be conducted.

a. _____

b. _____

8) Which of the following is not a phase of a Functional Behavior Assessment?

a. Descriptive Phase

b. Interpretive Phase

c. Experimentation Phase

d. Treatment Implementation & Monitoring

9) Which of the following is NOT an essential component of a Behavior Intervention Plan

a. Operational definitions of target behaviors

b. Definition of negative consequences

c. Treatment monitoring (who, when, where)

d. Treatment integrity/fidelity

10) The definition of level is:

a. Direction of change from beginning to end

b. Some average level of performance

c. The spread of data points

11) Direction of change from beginning to end is called:

a. Level

b. Variability

c. Trend or rate of improvement

12) Baseline is when:

a. There is no intervention in place.

b. The intervention is introduced.

c. The intervention is monitored.

13) When should you change from baseline:

a. When you have stability
b. When you are introducing one element at a time
c. When you have the opposite trend of what is desired
d. All of the above

14) Which of the following is an option when reviewing the data?

a. Revision
b. Continuation
c. Termination
d. All of the above

Appendix C

Positive Behavior Intervention and Supports (PBIS) throughout the Tiers – Module 2 Pre-Test

Site: _____

Name: _____

School: _____ District: _____

1) A _____ is an assessment utilized to evaluate a child's behavior and determine the purpose or function of that behavior.
    a. Comprehensive Assessment
    b. Behavior Intervention Plan
    c. Functional Behavior Assessment
    d. Functional Analysis
2) The result or outcome of a functional behavior assessment should always be the implementation of a/an __Behavior Intervention Plan _____.
3) Read the following statement: A child loses their cell phone due to disrespectful behavior. This statement is an example of what?
    a. Positive Reinforcement
    b. Negative Reinforcement
    c. Punishment
    d. Response cost
4) Read the following statement: After a child cleans their room appropriately without being told, their chore of taking out the garbage is taken away or removed.
    a. Positive Reinforcement
    b. Negative Reinforcement
    c. Punishment
    d. Response cost
5) What is used to assess the validity of an observation?
    a. Interval Recording
    b. Interobserver Agreement

c. Antecedent Manipulation

d. Narrative Observation

6) List two empirically supported Functions of Behavior.

a. Attention

b. Escape

7) List two times when a Functional Behavior Assessment should be conducted.

a. At the beginning of Tier 3 when the student's problem behavior impedes the learning of self or others,

b. When there is a known history of problem behavior,

c. When the student's suspensions approach 10 cumulative days,

d. Before the student's placement into an alternative education setting,

e. When the student's behavior presents a danger to self or others.

8) Which of the following is not a phase of a Functional Behavior Assessment?

a. Descriptive Phase

b. Interpretive Phase

c. Experimentation Phase

d. Treatment Implementation & Monitoring

9) Which of the following is NOT an essential component of a Behavior Intervention Plan

a. Operational definitions of target behaviors

b. Definition of negative consequences

c. Treatment monitoring (who, when, where)

d. Treatment integrity/fidelity

10) The definition of level is:

a. Direction of change from beginning to end

b. Some average level of performance

c. The spread of data points

11) Direction of change from beginning to end is called:

a. Level

b. Variability

c. Trend or rate of improvement

12) Baseline is when:

a. There is no intervention in place.

b. The intervention is introduced.

c. The intervention is monitored.

13) When should you change from baseline:

a. When you have stability

b. When you are introducing one element at a time

c. When you have the opposite trend of what is desired

d. All of the above

14) Which of the following is an option when reviewing the data?

a. Revision

b. Continuation

c. Termination

d. All of the above

Appendix D

Case Study Vignette (Tier 3)

Please read the information provided below about a teacher referral for Tier 3 and respond to the questions to the best of your ability.

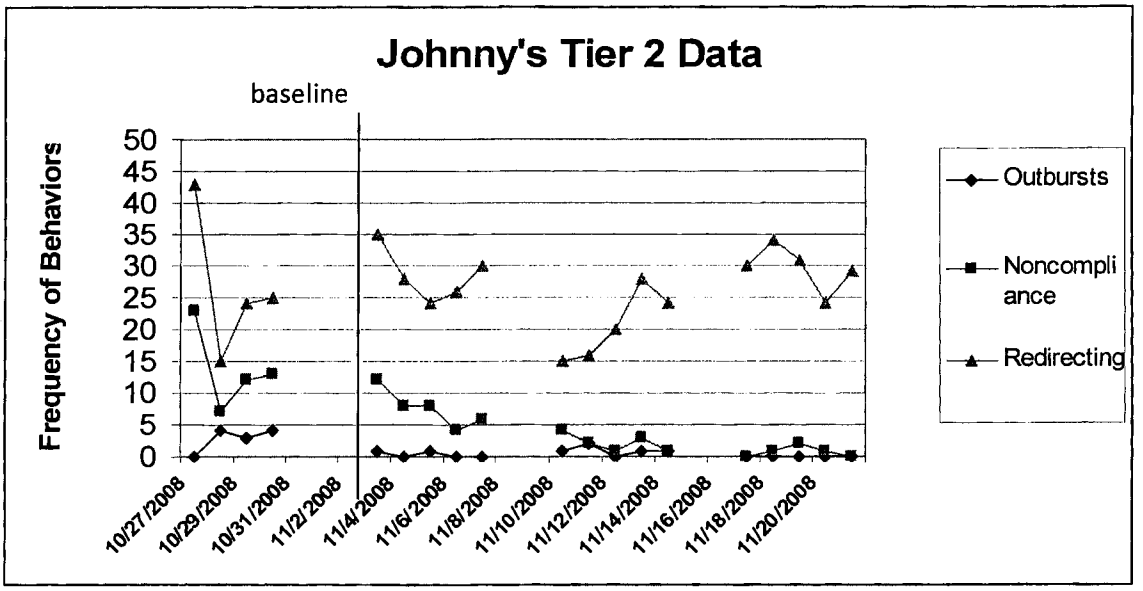
Student data and Problem Description:

Johnny, a male, kindergarten student was referred to the school psychologist due to classroom behaviors. The behaviors included off-task, talking out, walking around the room, verbally aggressive outbursts and tantrums and noncompliance.

A tier 2 intervention had been recommended by the teacher support team and implemented by the teacher. The target behaviors for tier 2 were outbursts, noncompliance, and redirections to task.

Outbursts: tantrums that include yelling and throwing items in the classroom across the room. This may also include kicking and hitting tables and chairs as well as throwing chairs.
Noncompliance: failure to comply with teacher directions after 5 seconds
Redirections: any instance of Johnny being off-task that required the teacher to either physically or verbally prompt him to get back to the current task. The task can include attending to the teacher while on the carpet, completing individual assignments, going back to his center activity, etc.

Below are the data collected for the tier 2 intervention.



Based on the information provided above answer the questions below.

1. Which behavior was the most problematic?

_____

2. Does the Tier 2 intervention appear to be successful for any of the behaviors addressed? If so, which behaviors?

_____

3. Which behavior(s), if any, should be targeted for Tier 3?

_____

Functional Behavior Assessment:

Based on information provided by the teacher, Johnny's most problematic behavior was reported to be his constant demand for attention which occurred all day and was extremely unmanageable and disruptive. Johnny was reported to be more likely to complete work in the morning and less likely to complete new or difficult work. Additionally, he was less likely to complete work when told to stop an activity, begin a new activity or when a request was denied. Other antecedents to his behavior include the absence of the teacher or if he is not provided with a choice. The typical consequences for his behaviors have included praise for efforts, ignoring, redirection, reprimands, or access to preferred activity.

Direct observations indicated that Johnny was observed to follow the teacher around the classroom frequently making attempts to talk or show things to her. During his transition from his table to the carpet he continued to walk and talk and request an additional minute when redirected to the carpet. Throughout circle time, Johnny has his hand up for every question and continued to answer or comment whether or not he was called. During center time, he was often observed to attempt to do the activity he preferred. During this time, he frequently sought teacher assurance that he could move to a certain seat or engage in a specific activity. Additionally, he often asked for reassurance and praise from the teacher regarding his completion of assignments.

These results suggest there is a functional link between both attention and access to preferred task and Johnny's behavior.

DEVELOP A TIER 3 BEHAVIOR INTERVENTION PLAN FOR YOUR TARGETED BEHAVIOR(S).

Use the attached blank behavior intervention plan form to write on. When you complete the BIP, complete the following questions.

1. Who will implement the BIP?

_____

2. When will progress monitoring occur and who will be in charge of it?

_____

3. When will implementation of the intervention be observed (implementation integrity) and by whom?

---

4. What will your long term goal be for the target behavior?

Appendix E

Case Study Vignette

Please read the information provide below about a student beginning Tier III and respond to the questions to the best of your ability.

Student data:

Egbert, a male, kindergarten student was referred to the school psychologist due to classroom behaviors. The behaviors include cussing frequently in class, not completing assignments, and "bothering" other students. Bothering was later determined to be poking and touching other students.

Based on classroom observations, the average percent of appropriate behavior for the class is typically at about 85%.

Progress monitoring decisions:
Based on the information provided above answer the questions below.

1. List and define your target behavior(s).

_____

2. How do you plan on evaluating intervention effectiveness? What, specifically, will be measured?

_____

3. How frequently will you measure progress? Whose progress will be measured?

_____

4. What day or days of the week will progress monitoring occur?

_____

5. When will implementation of the intervention be observed and by whom?

_____

6. What will your long term goal be for the target behavior?

_____

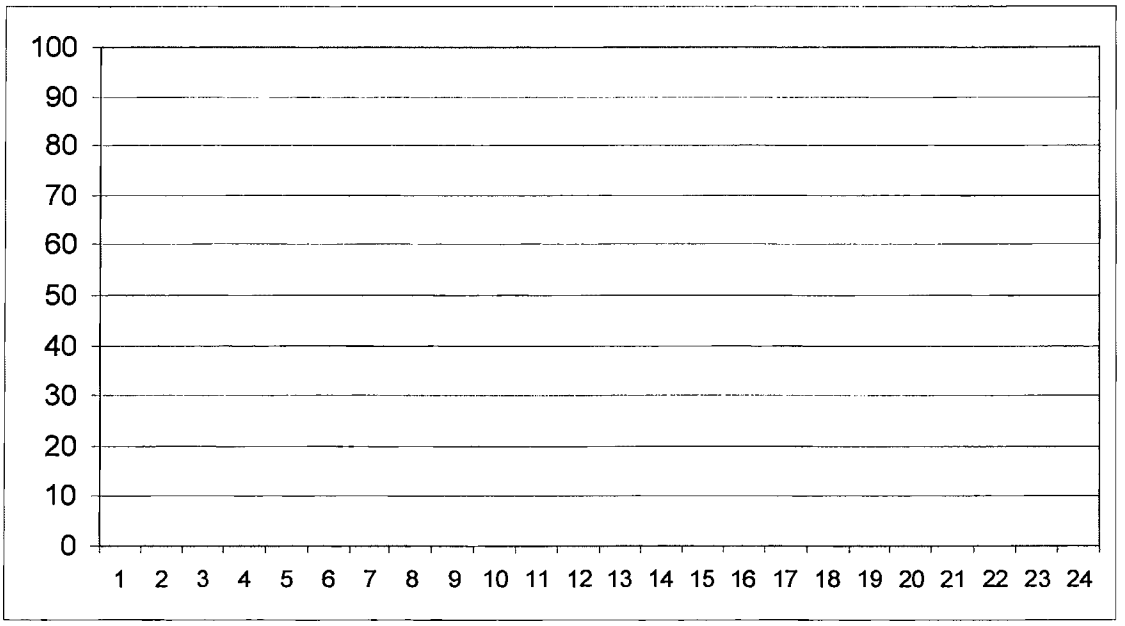
Documenting of progress using graphical display:

Progress Monitoring Data

Below are data from progress monitoring of Egbert's intervention. The specific numbers are percentage of appropriate behavior each day.

Baseline data: 30, 35, & 25
Intervention data: 45, 50, 55, 45, 60, 45, 40, 45, 50, & 45

Using the data above create a graph which plots the intervention results.
Include appropriate **axis labels, phase labels, phase change lines, aim line** and **goal line.**



** 24 sessions does not indicate that you only need that many data points or sessions... it was simply to make the numbers big enough to be visible on the page.

Appropriate Decision Making

1. Based on the data present do you have sufficient data to make a decision about the intervention?

_____

2. If so, is the intervention effective?

_____

3. Will the intervention resolve the problem in an appropriate time frame?

_____

4. Based on the data presented will you continue the current intervention, modify and continue or terminate the intervention? Why?

5. Based on the current trend, will Egbert meet the goal by the end of Tier III?